REMARKS

Claims 1, 2, 4, 6-7 were pending in the application following the amendment filed July 29, 2008. Claim 2 is cancelled above and new claims 14-16 are added. Claims 1, 4, 6-7 and 14-16 are pending in the application. Reconsideration of the pending claims in view of the above amendments and following remarks is respectfully requested.

The withdrawal of all prior art rejections is acknowledged.

Rejection Under 35 U.S.C. §112, first paragraph

Claims 1-2, 4 and 6-7 stand rejected under 35 U.S.C. §112, first paragraph, as failing to satisfy the enablement requirement, because, *inter alia,* the specification establishes no causal link between sepsis and the antibodies.

Claim 1 is amended above to focus the method on a particular patient population, that is, patients at risk of sepsis following a sepsis-risk event, such as surgery, burn etc. and to clarify that the anti-AG_{M1} antibodies to be measured are of the IgG and/or IgA type. Support for the amendment can be found in the specification beginning at page 8, line 29 and in former claim 2, which is now cancelled.

Support for new claims 14-17 can be found in the specification at page 8, line 29 to page 9, line 3 and page 9, lines 13 to 22 and in the original claims.

On page 4, the Office Action states:

> "The specification discloses in Figures 1-4 and on pages 25, line 20 to page 31, line 32 that serum from 20 sepsis patients were tested for the presence of antibodies which bind to AG_{M1}; and 89 sepsis patients and 137 normal control patients were tested for the presence of antibodies which bind to G_{M1}. Immunoglobulin IgG and IgA subclasses were determined in the 20 sepsis patients that were tested for the presence of antibodies which bind to AG_{M1}. Although Figures 3 and 4 list control patients, the specification only discloses that control patients were measured for the presence of

> antibodies that bind G_{M1}, *not* AG_{M1}. The specification discloses on page 31 that because sepsis patients had increased AG_{M1} antibodies of the IgA and IgG subclasses, without having increased AG_{M1} IgM antibodies, then the IgA and IgG antibodies were already present in the patients and contributed to their sepsis or the antibodies were activated in the pre-sensitized immune system."

It is not clear to Applicant what is intended by the above statement. Applicants note that the section entitled "Control sera" on page 29, lines 5-14, clearly states that, "...For the antibody determinations using GA-CTs which were coated with AG_{M1}, a partial group of these sera [the 137 control sera used to measure anti-G_{M1}] which comprised only 30 sera was measured."

The Examiner has also taken the position that the disclosures of Badgwell et al. and Heremans et al. teach that sepsis is not causally linked to AG_{M1} IgG and IgA antibodies. Both Badgwell et al. and Heremans et al. implicate natural killer (NK) cells in the response to endotoxin-induced shock, using anti-AG_{M1} antibodies to deplete the subject animals of NK cells, with Heremans et al. observing that the depleted animals were rendered resistant to lethal reaction (page 1158, column 2, first paragraph under Discussion.) Neither reference, however, draws any conclusions regarding the role of anti-ganglioside antibodies in the development or diagnosis of sepsis.

With respect to enablement, Applicant has identified a specific patient population to be tested for anti-AG_{M1} antibodies of the IgG and/or IgA type, specifically patients who are at risk of developing sepsis following a sepsis risk-inducing event, for example, surgery, burn or other trauma. Accordingly, there is unlikely to be significant if any overlap with other disease states associated with increased levels of anti-AG_{M1} antibodies. The significance of the claimed method is to provide early diagnosis of sepsis to ensure rapid intervention.

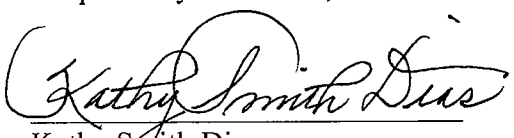
Applicants urge that Figures 3 and 4 of the present application speak for themselves in establishing a positive correlation between anti-AG_{MI} antibody levels and sepsis: 100% of sepsis patients tested for anti-AG_{MI} antibodies of the IgA type had levels that were clearly elevated over control individuals (Figure 4). Furthermore, only one sepsis patient had levels similar to control individuals tested for anti-AG_{MI} antibodies of the IgG type; all others, that is, 95% of sepsis patients tested, had anti-AG_{MI} ***antibody levels elevated over normal controls*** (Figure 3). Thus, the skilled artisan would have no trouble distinguishing the sepsis group from the non-sepsis group; by extension, ***elevated levels*** of anti-AG_{MI} antibodies of the IgG or IgA subtype must indicate sepsis or a risk of sepsis, since elevated levels do not appear in non-sepsis individuals.

With respect to measurement of "at least one further sepsis parameter", for example, procalcitonin, the use of procalcitonin as a biomarker for sepsis was well known in the art at the time the application was filed. (See discussion of procalcitonin in specification at pages 5 and 6 and US 5,639,617.)

The new matter rejection with respect to the terms "method for confirming a diagnosis" comprising determining the amount of anti-AG_{MI} antibodies in blood of a "patient in whom sepsis-associated symptoms are present" is rendered moot by the above amendment.

Once the Examiner has had an opportunity to review the above amendment and remarks, Applicants respectfully request that she contact Applicant's undersigned Attorney at the telephone number given below to schedule a telephone interview.

Respectfully submitted,



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